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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/825,426	04/03/2001	Glenn Frank	20062/3-CIP	2062

7590 06/30/2006

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EXAMINER

OYEBISI, OJO O

ART UNIT	PAPER NUMBER
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3628

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/825,426	FRANK ET AL.	
	Examiner	Art Unit	
	OJO O. OYEBISI	3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

In the amendment filed on 04/04/06, the following have occurred: Claim 8 has been amended. The objection to the disclosure and to claims 8-10 has been withdrawn. Further, the 35 U.S.C 102 (e) rejection of claims 1-12 has also been withdrawn. Claims 1-12 stand rejected in this office action.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 9-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 9-12 recite the phrase "tax deferred accounts" in the preamble, but recite the phrase "tax free accounts" in the body of the claim. Thus, it is not clear to the examiner which account the applicant is referring to. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. Claims 1, 6-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Jones et al (Jones hereinafter, US PAT: 6,021,397).

Re claims 1 and 7. A system, for running on a computer, for determining an investment strategy for an entity with assets in taxable and tax-free accounts (i.e., non taxable accounts, see col.10 line 45), comprising: an account information input component, to accept information regarding said assets in said taxable and tax-free accounts for said entity (Jones discloses the AdviceServer which is shown as “the central database repository for holding user profile and portfolio data, see col.5 lines 37-40), an investment selection input component, to accept information regarding a plurality of investments, including an indication of a percentage amount of said assets to invest in each of said plurality of investments (see Jones col.17, lines 17-34); an account amount selection component, to determine an amount to invest from said taxable accounts and tax-free accounts in each of said plurality of investments, wherein said determined amounts substantially matches said indication of a percentage amount to invest in each of said plurality of investments (i.e., The tax adjustment module 320 takes into account tax implications of the financial products and financial circumstances of the user. For example, the tax adjustment module 320 may provide methods to adjust taxable income and savings, as well as estimates for future tax liabilities associated with early distributions from pension and defined contribution plans, and deferred taxes from investments in qualified plans. Further, the returns for financial products held in taxable investment vehicles (e.g. a standard brokerage account) may be adjusted to take into account expected tax effects for both

accumulations and distributions. For example, the component of returns attributable to dividend income should be taxed at the user's income tax rate and the component of returns attributable to capital gains should be taxed at an appropriate capital gains tax rate depending upon the holding period, see col.10, lines 18-53); a time horizon input component, to accept an indication of a time horizon(Jones discloses this feature in the paragraph ending at the top of col.11, lines 1-6); and a return on investment calculation component, to calculate a return on investment for said entity based on said information regarding said assets, said information regarding a plurality of investments, said indication of a percentage amount, said selected amount to invest from said taxable and said tax-free accounts, and said indication of a time horizon (see col.10 lines 42-53); wherein said account amount selection component determines an amount from said taxable and tax-free accounts in order to produce a maximal after-tax accumulation for said entity at said time horizon (i.e., The portfolio optimization module 340 calculates the utility maximizing set of financial products under a set of constraints defined by the user and the available feasible investment set. In one embodiment, the calculation is based upon a mean-variance optimization of the financial products. The constraints defined by the user may include bounds on asset class and/or specific financial product holdings. In addition, users can specify intermediate goals such as buying a house or putting a child through college, for example, that are incorporated into the optimization, see col.10 lines 54-62).

Re claim 6. Jones further discloses the system of claim 1 further including: a personal tax component, to accept information regarding personal tax rates for said entity,

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wherein said a return on investment calculation component calculates a return on investment for said entity based on said information regarding said personal tax rates (i.e., Finally, the tax module 320 facilitates tax efficient investing by determining optimal asset allocation among taxable accounts (e.g., brokerage accounts) and nontaxable accounts (e.g., an Individual Retirement Account (IRA), or employer sponsored 401(k) plan). In this manner the tax module 320 is designed to estimate the tax impact for a particular user with reference to that particular user's income tax rates, capital gains rates, and available financial products. Ultimately, the tax module 320 produces tax-adjusted returns for each available financial product and tax-adjusted distributions for each available financial product, see col.10 lines 43-53).

Re claim 8. Jones further discloses the method of claim 7 wherein said step of determining an amount to invest from said taxable and tax-free accounts includes calculating tax consequences over said time horizon for said entity based on said amounts to invest (i.e., Finally, the tax module 320 facilitates tax efficient investing by determining optimal asset allocation among taxable accounts (e.g., brokerage accounts) and nontaxable accounts (e.g., an Individual Retirement Account (IRA), or employer sponsored 401(k) plan). In this manner the tax module 320 is designed to estimate the tax impact for a particular user with reference to that particular user's income tax rates, capital gains rates, and available financial products. Ultimately, the tax module 320 produces tax-adjusted returns for each available financial product and tax-adjusted distributions for each available financial product, see col.10 lines 43-53).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claim 2-3, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones in view of Kasscieh (Kass hereinafter, "Investment Decisions Using Genetic Algorithms" in the proceedings of the Thirtieth Hawaii International Conferences on System Sciences" in Jan 1997.)

Re claims 2 and 3. Jones discloses the system wherein said account amount selection component selects amounts from said taxable and tax-free accounts are performed plurality of times (i.e., The tax adjustment module 320 takes into account tax implications of the financial products and financial circumstances of the user. For example, the tax adjustment module 320 may provide methods to adjust taxable

income and savings, as well as estimates for future tax liabilities associated with early distributions from pension and defined contribution plans, and deferred taxes from investments in qualified plans. Further, the returns for financial products held in taxable investment vehicles (e.g. a standard brokerage account) may be adjusted to take into account expected tax effects for both accumulations and distributions. For example, the component of returns attributable to dividend income should be taxed at the user's income tax rate and the component of returns attributable to capital gains should be taxed at an appropriate capital gains tax rate depending upon the holding period....., see col.10, lines 18-53). Jones does disclose random amount selection and an after-tax accumulation calculation for said entity based on said randomly selected amounts. However, Kass discloses random selection (see Kass, last paragraph on the first col. Of pg 487). It would have been obvious to add Kass enhancement to Jones since this would just be an extension of the financial examples given by Kass.

Re claim 9. The method of claim 8 wherein said step of determining an amount to invest from said taxable and tax deferred accounts further includes: performing sampling steps a plurality of times (i.e., The tax adjustment module 320 takes into account tax implications of the financial products and financial circumstances of the user. For example, the tax adjustment module 320 may provide methods to adjust taxable income and savings, as well as estimates for future tax liabilities associated with early distributions from pension and defined contribution plans, and deferred taxes from investments in qualified plans. Further, the returns for financial products held in

taxable investment vehicles (e.g. a standard brokerage account) may be adjusted to take into account expected tax effects for both accumulations and distributions. For example, the component of returns attributable to dividend income should be taxed at the user's income tax rate and the component of returns attributable to capital gains should be taxed at an appropriate capital gains tax rate depending upon the holding period....., see col.10, lines 18-53), determining appropriate amounts from said taxable accounts so that said selected percentage amounts for each of plurality of investments is satisfied (i.e., Portfolio Optimization, this determines the portfolio percentages, see col.17 lines 17-34, also see "plan monitoring section", there is a discussion of how the system can adjust to changes or adjustments, col.18 lines 51-67); and determining a result if said amounts were invested as selected and determined for said time horizon (i.e., The portfolio optimization module 340 calculates the utility maximizing set of financial products under a set of constraints defined by the user and the available feasible investment set. In one embodiment, the calculation is based upon a mean-variance optimization of the financial products. The constraints defined by the user may include bounds on asset class and/or specific financial product holdings. In addition, users can specify intermediate goals such as buying a house or putting a child through college, for example, that are incorporated into the optimization, see col.10 lines 54-62). Jones does not explicitly disclose said sampling steps comprising: randomly selecting amounts from said tax-free accounts to invest in each of said plurality of investments. However, Kass makes this disclosure (see Kass, last paragraph on the first col. of pg 487). It would have been obvious to one of ordinary

skill in the art to add Kass enhancement to Jones since this would just be an extension of the financial examples given by Kass.

7. Claims 4-5, 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones in view of Shoaf ("The Efficient Set GA for Stock Portfolios" in the IEEE World Conferences on Computational Intelligence held on May 4-9, 1998)

Re claim 4. Jones further discloses the system of claim 1 wherein said account amount selection component selects an amount from said taxable and tax-free accounts (see col.10, lines 18-53) except for using Genetic Algorithms (GA) in order to produce a maximal return on investment for said entity at said time horizon. However, Shoaf discloses GA to produce an efficient set portfolio starting on section 2 on the second col. of pg 354. Thus it would have been obvious to one of ordinary skill in the art to add Shoaf's enhancement to Jones since Shoaf's method is a type of portfolio Optimization and would allow greater performance.

Re claim 5. Jones as shown in claim 4 supra discloses the system wherein said account amount selection component selects an amount from said taxable and tax-free accounts (see col.10, lines 18-53) Jones does not explicitly disclose the system further including: a chromosome structure, for use with said Genetic Algorithms, wherein said chromosome structure includes a plurality of values, each value being an indication of an amount from said tax-free accounts to invest in a selected one of said plurality of investments; and said return on investment calculation component calculates an after-tax accumulation for said entity based on said values in said chromosome structure. However, Shoaf discloses GA to produce an efficient set portfolio starting on section 3

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on the second column of page 356. Thus it would have been obvious to one of ordinary skill in the art to add Shoaf's enhancement to Jones since Shoaf's method is a type of portfolio Optimization and would allow greater performance.

Re claim 10. Claim 10 recites similar limitations to claim 5 and thus rejected using the same art and rationale as in claim 5 supra.

Re claim 11. Jones further discloses the method of claim 10 further including the step of: calculating an improvement value of said substantially maximal after-tax accumulation based on said determined investment amounts from said taxable and tax-free accounts, as compared to an after-tax accumulation based on said initial settings (i.e., Jones as shown in claims 1 and 7 above selects from taxable and tax free accounts and computes the after tax accumulation. Jones also discloses in the portfolio Optimization module on col.10, lines 54 to col.11 line 6 "utility maximizing set of financial products).

Re claim 12. Jones discloses a computer system for determining an optimal investment strategy for an entity with assets in taxable and tax-free accounts, comprising: means for obtaining tax information, account information, account amounts, and time horizon information from said entity (i.e., AdviceServer which is shown as the central database repository for holding user profile and portfolio data, see col.5 lines 37-40); means for obtaining initial amounts to invest in said taxable and tax-free accounts; means for calculating an after-tax accumulation based on indications (i.e., The tax adjustment module 320 takes into account tax implications of the financial products and financial circumstances of the user. For example, the tax adjustment module 320 may provide

methods to adjust taxable income and savings, as well as estimates for future tax liabilities associated with early distributions from pension and defined contribution plans, and deferred taxes from investments in qualified plans. Further, the returns for financial products held in taxable investment vehicles (e.g. a standard brokerage account) may be adjusted to take into account expected tax effects for both accumulations and distributions. For example, the component of returns attributable to dividend income should be taxed at the user's income tax rate and the component of returns attributable to capital gains should be taxed at an appropriate capital gains tax rate depending upon the holding period....., see col.10, lines 18-53); and means for displaying said resulting after-tax accumulation (see col.10 lines 50-52, also see fig.1 element110, also see fig.2 element 221). Jones does not explicitly disclose a GA structure, means for calculating an after tax accumulation based on indications in said GA, and means for modifying said GA chromosome structure to improve said calculated after-tax accumulation. However, Shoaf discloses GA to produce an efficient set portfolio (see section 2, second col.of pg 354). Shoaf also discloses the chromosome structure to produce an efficient set portfolio (see section 3 on the second col. Of page 356). Shoaf further discloses setting values and evaluating the fitness and selecting the model (see first col. Of pg 357). Thus it would have been obvious to one of ordinary skill in the art to add Shoaf's enhancement to Jones since Shoaf's method is a type of portfolio Optimization and would allow greater performance.

Response to Arguments


Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OJO O. OYEBISI whose telephone number is (571) 272-8298. The examiner can normally be reached on 8:30A.M-5:30P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, HYUNG S. SOUGH can be reached on (571)272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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